## CLAIMS:

claim:

1. A thermoplastic molding process comprising the steps of:

selecting a thermoplastic extrusion die for the extrusion of a thermoplastic slab, said extrusion die having adjustable die gate members for varying the thickness of the extruded material in different parts of the extruded slab;

adjusting the thermoplastic extrusion die for varying the thickness of the extruded material passing therethrough in different parts of the extruded slab;

heating a thermoplastic material to a fluid;

extruding a slab of said fluid thermoplastic material through said selected and adjusted thermoplastic extrusion die;

trimming said extruded thermoplastic slab having a variable thickness to a predetermined size;

placing said trimmed slab of heated thermoplastic material into a thermoforming mold; and

molding a predetermined thermoformed part in said mold, whereby a molded part is formed with a variable thickness from a slab of material heated during extrusion of the material.

2. A thermoplastic molding process in accordance with claim 1 including the step of moving thermoforming mold having a molded part therein while said mold is cooling.

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3. A thermoplastic molding process in accordance with claim 2 including the step of moving a second thermoforming mold in position for receiving the next trimmed thermoplastic slab.

4. A thermoplastic molding process in accordance with claim 3 including the step of rotating thermoplastic molds on a table to position one mold at a time in a position to receive the next trimmed thermoplastic slab.

5. A thermoplastic molding process in accordance with claim 4 in which the step of selecting an extrusion die includes selecting a die having a plurality of gate plates therein placed adjacent to each other and separately adjustable to thereby vary the thickness across the thermoplastic material being extruded thereby.

6. A thermoplastic molding process in accordance with claim in which the step of selecting a die includes selecting a die in which each of said plurality of gate plates is attached to motor allowing the each plate to be moved remotely to vary the position of each plate separately.

7. A thermoplastic molding process in accordance with claim 6 in which each said motor is an electric stepper motor.

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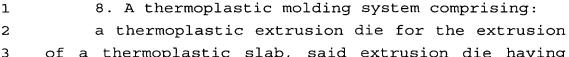
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of a thermoplastic slab, said extrusion die having adjustable die gate members for varying the thickness of the extruded material in different parts of the extruded slab;

a trimmer for cutting said extruded thermoplastic slab from said thermoplastic extrusion die;

a plurality of thermoplastic molds, each mold being mounted on a movable platform for moving one mold at а time in a position to receive thermoplastic being slab trimmed from thermoplastic extrusion die, whereby a molded part can be formed with a variable thickness from a heated slab of thermoplastic material being fed still heated from an extrusion die.

- 9. A thermoplastic molding system in accordance with claim 8 in which said plurality of molds moves on said movable platform between a mold loading position and a mold release position.
- 10. A thermoplastic molding system in accordance with claim 9 in which said mold moveable platform is a rotating platform rotating each said thermoplastic mold mounted thereon to position one mold at a time in a position to receive the next trimmed thermoplastic slab from said extruding die.

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- 11. A thermoplastic molding system in accordance with claim 10 in which said extrusion die plurality of die gate members includes a plurality of extrusion die plates therein positioned adjacent to each other and separately adjustable to thereby vary the thickness across thermoplastic material being extruded from said die.
- 1 12. A thermoplastic molding system in accordance with claim 11 in which said thermoplastic extrusion die has a plurality of gate plates each having a motor coupled thereto for moving each gate plate separately by remote control.
- 1 13. A thermoplastic molding system in accordance with claim 12 in which each said motor is an electric stepper motor.